Errata Sheets

“Nothing is Perfect-An Insider’s Evaluation of Regression Equations Sets for Calculating Flood Flows in Nebraska”

Subsequent to the publication of “Nothing is Perfect-An Insider’s Evaluation of Regression Equations Sets for Calculating Flood Flows in Nebraska” by Jeffrey T. Shafer, it was discovered that an original publication referenced in the report had an errata sheet issued that affected statements made in the text. Table 1 and portions of the text have been removed to reflect changes to the reference.

Attached is a replacement page that should be substituted for Page 6 of the paper.

you are in fact in that region or are in one of the surrounding regions. One important note is that without a GIS to calculate some of the parameters, it would be virtually impossible to calculate flows.

In the Central and South-Central Region, the parameter (TTP-2) is raised to a power of 3.83, making it exceptionally sensitive to minor changes in the estimate of the 2-year, 24-hour intensity. Changing the parameter value from 0.5 to 0.4 would reduce the flow estimate by 58%. Other sensitive values are soil available water content in the high permeability region and main channel slope in the Upper Republican Region.

The peak flow values used in the report were developed using data up through 1993, 2 more years of record than Cordes and Hotchkiss. Bulletin 17B methods were used for determining the peak flows.

Strahm and Admiraal, 2004[6]

This report was developed at the University of Nebraska Civil Engineering Department and sponsored by the Nebraska Department of Roads. The purpose of the study was to modify the Soenksen regional regression equations so that flows could be programmed into a GIS. As with Soenksen, the state is divided into 7 regions based on the soil permeability or watershed boundaries. With a few exceptions, the region boundaries line up with Soenksen. Each region has eight associated equations for calculation of the 50%, 20%, 10%, 4%, 2%, 1%, 0.5%, and 0.2% annual chance flows and eight more for doing the same calculations on watersheds less than 10 square miles in area.

This regression set was easily programmed into ArcView. The parameter definitions were clearly described in the report. The parameters used in the regression set were easily calculated in a geographic information system environment with the exception of contributing drainage area. As with the other equations, it is difficult to estimate the portion of a watershed that contributes to drainage area.

The regions for this equation were defined similarly to the regions defined for the Soenksen equations, although there are a few areas that fall into a different region. Therefore the Strahm and Admiraal equations, as with the Soenksen equations, suffer from ambiguity with respect to overlapping regions and the poorly-defined high permeability region. As with the Soenksen equations, without a GIS to do some of the parameter calculations, it would be virtually impossible to calculate peak flows.

[6] Strahm, B.J. and D.M. Admiraal. *Regression Equations.* NDOR Research Project No. SPR-1(2) P541. 2004.